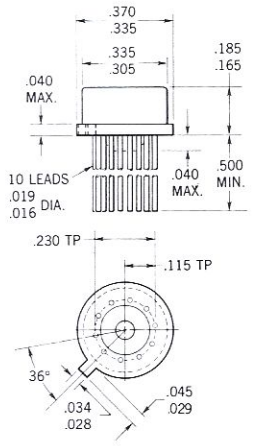
SH 3001
ANALOG SWITCH
FAIRCHILD HYBRID CIRCUITS

- INPUTS CCSL COMPATIBLE
- mW MICROLOGIC AND MICROLOGIC COMPATIBLE INPUTS
- LOW FEED THROUGH SPIKES ON THE OUTPUT
- TYPICAL t_{on} - - 145 ns LOADED
- APPLICATIONS - - SCANNING, MULTIPLEXING, A/D CONVERSION, 4-POLE ST NORMALLY OPEN RELAY OR CHOPPER

PHYSICAL DIMENSIONS

TO-100
(10 pin package)



NOTES: All dimensions in inches
Leads are gold-plated kovar
Lead No. 1 internally connected to case
Package weight is 1.02 grams

PART NO. HAG30011XX

ABSOLUTE MAXIMUM RATINGS

Maximum Temperatures

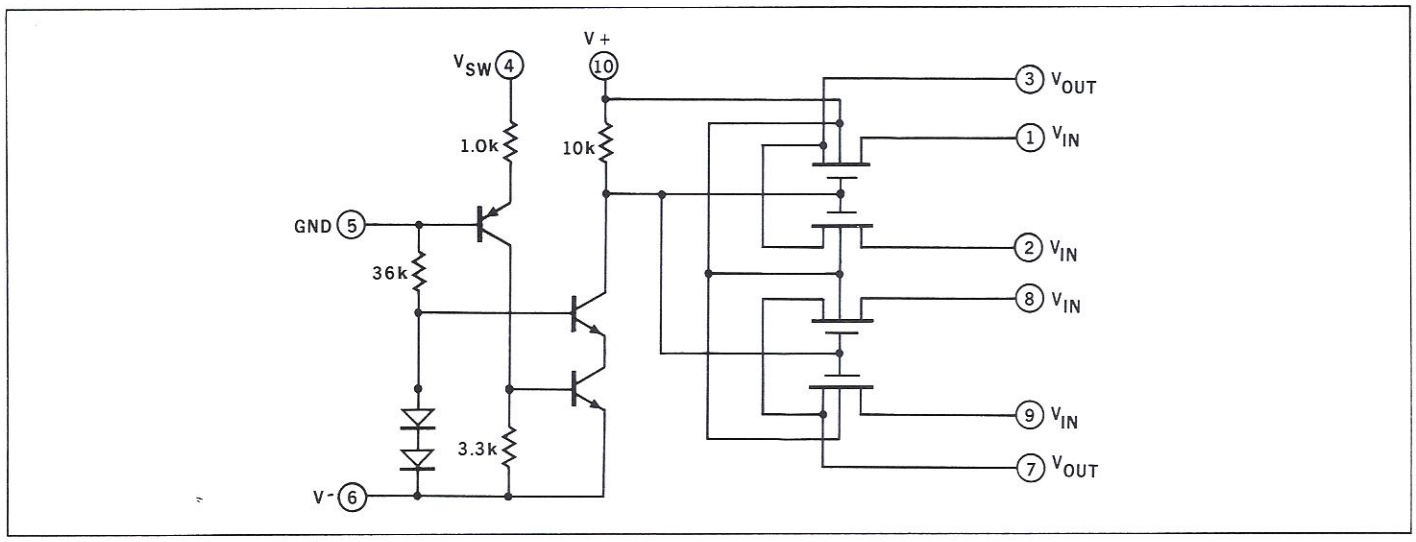
Storage Temperature	-65°C to +150°C
Operating Temperature	-55°C to +125°C

Maximum Power Dissipation

at 25°C Case	500 mW
at 25°C Ambient	350 mW

Maximum Voltages and Current

V_{in} (Pins 1, 2, 8 & 9)	± 10 V
V_{out} (Pins 3 & 7)	± 10 V
V^+ (Pin 10)	+ 11 V
V^- (Pin 6)	- 22 V
I_{in}, I_{out}	100 mA
V_{switch} (Pin 4)	± 6 V



Electrical Characteristics on page 2

313 FAIRCHILD DRIVE, MOUNTAIN VIEW, CALIFORNIA, (415) 962-5011, TWX: 910-379-6435

FAIRCHILD SEMICONDUCTOR
A DIVISION OF FAIRCHILD CAMERA AND INSTRUMENT CORPORATION

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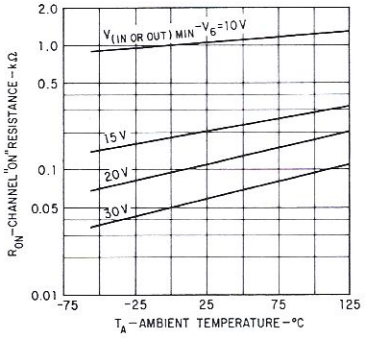
ELECTRICAL CHARACTERISTICS (T_A = 25°C, V^+ = 10 V, V^- = -20 V Unless Otherwise Specified)

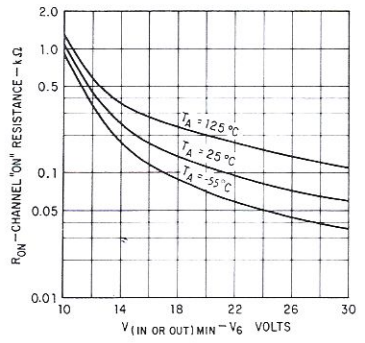
Symbol	Characteristic	Min.	Typ.	Max.	Units	Test Conditions
I_{SWH}	High Switch Drive Current (On)			0.4	mA	T_A = -55°C to +125°C
V_{SWL}	Low Switch Drive Voltage (Off)			0.6	V	T_A = 25°C
V_{SWL}	Low Switch Drive Voltage (Off)			0.5	V	T_A = -55°C, +125°C
$R_{ON/channel}$	Channel On Resistance		120	200	Ω	I_{SW} = 0.4 mA, I_{in} = 1.0 mA V_{out} = 0.0 V
I_{OFF}	Channel Off Leakage Current			1.0	nA	V_{SW} = 0.6 V
I_{OFF}	Channel Off Leakage Current			1.0	μA	V_{SW} = 0.5 V, T_A = +125°C
V_{IN}	Analog Peak Signal Input			±10	V	I_{IN} = 0, T_A = -55°C to +125°C
$-I_6$	Negative Supply Current		4.4	6.0	mA	I_{SW} = 0.4 mA, T_A = -55°C to +125°C
$C_{IN/channel}$	Channel Input Capacitance		3.5		pF	V_{SW} = 0.0 V V_{IN} = 0.0 V
C_{OUT}	Channel Output Capacitance		5.0		pF	V_{SW} = 0.0 V V_{OUT} = 0.0 V
t_{on}^+	Switch Turn-On Time		145	180	ns	See Figures 1 & 2
t_{on}^-	Switch Turn-On Time		230	280	ns	See Figures 1 & 3
t_{off}^+	Switch Turn-Off Time		580	600	ns	See Figures 1 & 2
t_{off}^-	Switch Turn-Off Time		270	300	ns	See Figures 1 & 3

TYPICAL ELECTRICAL CHARACTERISTICS

CHANNEL "ON" RESISTANCE VERSUS TEMPERATURE



CHANNEL "ON" RESISTANCE VERSUS V (IN OR OUT) MIN MINUS V_6



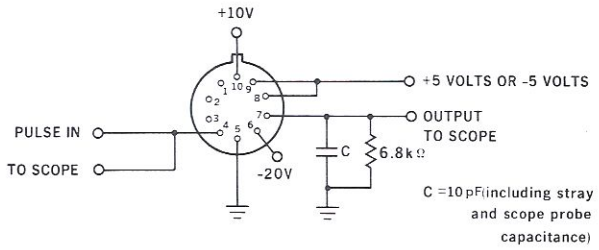


FIGURE 1

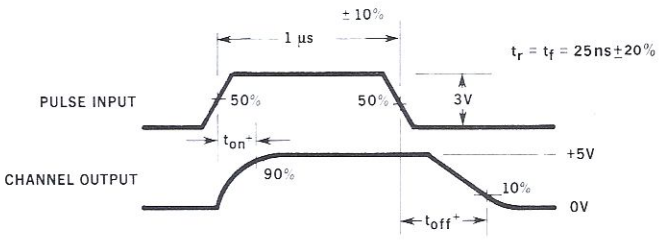


FIGURE 2

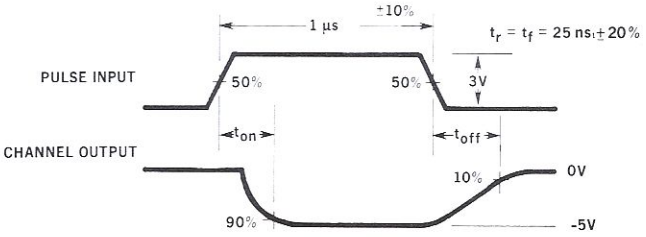


FIGURE 3

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